

REMARKS

The Office Action mailed on October 11, 2006 has been reviewed and the comments of the Patent and Trademark Office have been considered. Prior to this paper, claims 22-43 were pending. By this paper, Applicants do not cancel or add any claims. Therefore, claims 22-43 are now pending. Claims 22 and 33 have been amended based on the comments of the examiner in his latest office action.

Applicants respectfully submit that the present application is in condition for allowance for the reasons that follow:

Rejections Under 35 U.S.C. § 103

Applicants believe examiner correctly recognizes the similarities in structure of applicant's optical system and the optical system that would have resulted from combination of the art of Yin (6,386,050B1), Crosswy (3,552,855) and Johnson (3,511,227). Further, applicants believe examiner correctly recognizes that the intensity variations of light at the detector of these two optical systems are due to interactions of the light from the two beams at the detector.

However, the cause of the intensity variations at the detector of applicants' optical system and the optical system resulting from the combination of the art of Crosswy, Johnson, and Yin result from different physical processes. Applicants' process is the result of a phase delay of one of the beams with respect to the other due to the passing of one of the beams through a medium of altered density (the thermal marker). No frequency shift of either beam occurs in applicants' optical system. The process causing the intensity variation in the optical system resulting from the combined art of Crosswy, Johnson, and Yin is the heterodyne process where one or both of the beams have been shifted in frequency as a result of passing through the optical system. This shifting in frequency in the combined system of Crosswy, Johnson, and Yin is caused by the scattering of a portion of the light in one of the beams from moving particles.

Applicants believe that examiner's objections to applicants' claims can be removed by adding the limitation that neither of optical beams in applicants' optical system undergo a frequency shift. Applicants implement this additional limitation by amending the independent claims (22 and 33) in this way.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

Examiner Alsomiri is invited to contact the undersigned by telephone (760 917 1588) if it is felt that a telephone conversation would advance the prosecution of the present application.

Respectfully submitted,

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